Durham Anthropology Journal
Volume 13(1) ISSN 1742-2930

Download a PDF version of this article

The Anglo-Saxon Influence on Romano-Britain: Research past and present

Charlotte Russell

University of Durham

Abstract: The Romano-British to Anglo-Saxon transition in Britain is one of the most striking transitions seen in the archaeological record. Changes in burial practice between these periods, along with historical, anthropological, environmental and linguistic evidence have all been thought to indicate that a mass migration of Angles and Saxons into Britain occurred in the 5th century A.D. The writings of Gildas and Bede provide a starting point for research in this area, and their migration based viewpoints have long been the basis for research in other areas. However, in recent years, archaeological research has shifted to focus on social rather than biological identity, and `small bands' theories of cultural change through acculturation have predominated. In the last ten years, there has been a resurgence of interest in the biological identities of the population of `Anglo-Saxon England', and research from such diverse areas as dental anthropology and genetics has provided rather conflicting results. The author's PhD research concentrates on using traditional craniometric techniques and modern multivariate analyses to provide a new perspective on population change, between the Romano-British and Anglo-Saxon periods in the North East of England, and this research is outlined here following an assessment of the literature surrounding the topic.

1. Introduction

1.1. The long history of Britain as seen through archaeology and history involves a series of distinct cultural eras, divided and demarcated by transitional periods. One of the most ferociously debated topics in current archaeological and historical research is that of the nature of the Romano-British to Anglo-Saxon transition in Britain POSTER1, POSTER4. The archaeological differences between the Anglo-Saxon period, and the preceding Romano-British period are striking. As Sam Lucy writes, "The Roman period was characterised by settlement evidence, monumental architecture, distinctive building styles, imported pottery and metalwork. The archaeological remains reflect the world of the living: forts, roads, villas, settlements, enclosures. Cemeteries are found in some numbers but these generally concentrate around settlement sites" (1998: 2). Deceased individuals of the late Roman period were usually buried straight in the ground, most often placed with the head at the west end, and without any accompanying artefacts. In addition, "burial within the walls of Roman towns and cities was forbidden by law, so cemeteries were often placed by the side of major roads leading into the centres of population" (Lucy 2000: 1).

1.2. The early Anglo-Saxon period (5th to 7th centuries A.D.), on the other hand, is notable for its cemeteries, most of which are found in the southern and eastern parts of England. The relative profusion of Early Anglo-Saxon cemeteries is in stark contrast to the lack of known settlement sites of the same period. Such cemeteries can be distinguished by the number and type of grave goods found with a large proportion of the individuals in a cemetery, as well as by the type of burials. Individual corpses in this period were either cremated or inhumed, those inhumed most often being buried in graves or burial pits. Bodies were generally placed in such graves in an extended supine position, often with the head specifically oriented, although that orientation was much more variable than in late Roman cemeteries (Lucy 2000).

1.3. In addition to the distinctive deposition and orientation of corpses, Anglo-Saxon period graves were also commonly furnished with goods including jewellery, ornaments, brooches, beads, girdle-hangers and weaponry. Pottery and other vessels are sometimes found, as are toilet-sets, knives and amuletic items (*ibid* .).

1.4. Such a dramatic transformation apparent in the archaeological material culture of Britain leads to the problem to be addressed in this study: *what caused the changes which occurred around the 5* th *century A.D.?*

1.5. Attempts to answer this question have been made from within a number of disciplines, and in the next two sections I shall briefly outline these approaches.

2. Archaeological & Historical Research

The race of the Angles or Saxons, invited by Vortigern, came to Britain in three warships... They came from three very powerful Germanic tribes, the Saxons, Angles and Jutes. The people of Kent and the inhabitants of the Isle of Wight are of Jutish origin, and also those opposite the

Isle of Wight, that part of the kingdom of Wessex which is still today called the nation of the Jutes. From the Saxon country, that is, the district now known as Old Saxony, came the East Saxons, the South Saxons, and the West Saxons. Besides this, from the country of the Angles, that is, the land between the kingdoms of the Jutes and the Saxons, which is called *Angulus* , came the East Angles, the Middle Angles, the Mercians, and all the Northumbrian race (that is those people who dwell north of the river Humber) as well as the other Anglian tribes. *Angulus* is said to have remained deserted from that day to this. Their first leaders are said to have been two brothers, Hengist and Horsa (Bede, *Historia Ecclesiastica* I. 15. In Frazer and Tyrrell (Eds) 2000: 28).

2.1. This famous passage was written by the monk the Venerable Bede in the *Historia Ecclesiastica* , completed in 731 A.D. Its message is clear: Britain was invaded by the Angles and Saxons, who arrived *en masse* in the mid 5th century A.D. Bede's writings are one of the major sources of historical documentation of the period (although he was writing some 300 years after the supposed events took place) and were heavily influenced by the works of Gildas, whose *De excidio Britannae et conquestu* begins covering events in Britain in the 4th century A.D. and continues into his own day, thought to be sometime in the 6th century A.D. According to Gildas, in the 4th century A.D. the people of Britain came under repeated attack by the Picts and Scots at a time when the Roman armies had withdrawn from Britain. In defence, Saxon mercenaries were invited. However, the visiting mercenaries became more and more demanding of their hosts, eventually turning on the British, breaking their protective stance in favour of a savage attack on the towns, villages and inhabitants of the land. Many indigenous Britons were slaughtered; the survivors turned tail, and made for the safety of the mountains, only to be captured and enslaved (Winterbottom 1978: Ch. 25 in Lucy 2000:156).

2.2. While neither of these two writers provides a contemporaneous account of the events happening in Britain in the 5th century A.D., they are the earliest and most detailed historical records available, and have thus been extremely influential in subsequent thinking about the period. Their perspective is still taught to the schoolchildren of the 21st century, and provides a starting point for most researchers interested in the Romano-British / Anglo-Saxon transition.

2.3. The descriptions of events described by Gildas and Bede were for many years taken as fact, and early archaeological research endeavoured to `fit' the archaeological evidence to the historical sources. In recent decades, however, academic and socio-political emphases have changed, and the historical sources have been re-examined in the light of their own socio-political and cultural influences. Whilst not dismissing the value of the documentary sources entirely, researchers now understand them to be products of a very specific period in Britain's own history, imbued with their own morals and motives. Higham writes "Does Gildas' account deserve any credence? [...] Gildas was uninterested in history for its own sake but he used his own expurgated and partial account of the recent past to underline the sinfulness of the Britons and the plenitude of God's power, so as to reinforce and make terrible his strictures concerning the present" (1992:157).

2.4. The historical sources, then, are now considered by many to be of more use in teaching us about the social and political climate of the periods in which they were compiled, and as records containing first-hand information about the origin myths, legends and traditions of the British people, rather than as strictly factual sources. Nonetheless, as John Moreland comments, regarding the impact of the passage by Bede quoted above, "[t]his is the account of the Anglo-Saxon settlement which has so beguiled generations of archaeologists, historians, politicians and Churchmen. It provides the historical context within which many archaeologists have sought to situate their evidence" (2000:38). The documentary sources, then, are largely responsible for the long-standing assumption that the Romano-British to Anglo-Saxon transition was biologically based, the Anglo-Saxon immigrants / invaders producing the change subsequently seen in archaeological material culture, which will be discussed next. As Lucy notes, "[t]he `Coming of the Saxons' is now so much a part of our national mythology that it is often not realised that the origins of the people who lived in the eastern and southern part of Britain, now known as the English, have not always been traced back to Germanic invaders or migrants from the continent" (2000: 158).

2.5. As has been noted, for many decades (even centuries), archaeological evidence was situated within the frameworks for the Anglo-Saxon transition provided by the writers above. In the latter half of the 20th century, however, thinking about these sources changed fundamentally, and archaeological research began to focus on context, process and patterning, rather than on fitting in with historians' views of events. The argument over the biological identity of the people of 5th century Britain has since been played down, in favour of the more `anthropological' aim of determining and understanding evidence for the construction and maintenance of social identity in the early medieval period.

2.6. The `mass migration' described by Gildas and Bede is still very important to some researchers, however, and archaeological perspectives on the Anglo-Saxon transition may still be split into two main camps: those who maintain that the transition was caused by a mass (biological) immigration, versus those who propose an `acculturation' process, perhaps involving only the physical movement into Britain of warriors and perhaps other elites. Both sides of this debate remain reasonably well represented, although the latter is currently far more popular.

2.7. For example, Martin Welch states in his introduction to *Anglo-Saxon England* that "the first three centuries (c. 400-700) [of the Anglo-Saxon period...] is the crucial period of settlement and conquest by Angles, Saxons, Jutes and other peoples from north Germany and south Scandinavia. They created England, the land of the Angles, from Lowland Britain" (1992:9).

2.8. Despite acknowledging the criticisms of the historical sources, and of certain interpretations of the archaeology, Welch criticises some archaeologists for refusing to believe that more than a few immigrants from Germany and Scandinavia were involved in the transition. Such archaeologists, he suggests, prefer instead to favour those interpretations which emphasise the role of small warrior bands successfully gaining control of British regional kingdoms (*ibid* :11). Welch's criticisms are based on the viewpoint that, whilst historical sources should be treated with care, the `small - bands' theory "argues that we know much better than both contemporary and slightly later commentators who wrote about events in Britain" (*ibid* .). He argues that pottery and brooches found in Anglo-Saxon contexts in Britain "can be matched precisely back to those regions of north Germany and south Scandinavia which were their continental homelands according to Bede" (*ibid* .), and that folk costumes, cremation cemeteries and linguistic evidence all indicate the large scale immigration of family groups, or even whole communities, from abroad.

2.9. Welch's reasoning and hypothesis, whilst remaining popular amongst some academics and in popular thought, has been strongly criticised on a number of grounds, most notably on those which condemn the equation of cultural artefacts with biological ancestry. John Moreland notes that Welch's approach is essentially the same as that used by the typologists of the 19th and early 20th centuries, in which matches between English and continental material are sought and found, and subsequently labelled according to the `ethnic names' derived from the historical sources (2000:28). This approach has the unfortunate effect of ascribing, intentionally or otherwise, a homogeneity to these `ethnic' groups which to many theoreticians is entirely inappropriate. As Moreland notes, "Contrary to common understanding, it would be a gross error to assume that the Angles, Saxons and Jutes possessed discrete identities in their so-called homelands and maintained them in the early part of their settlement in England" (*ibid.* :35).

2.10. Welch's approach to the problem, according to Moreland, is trapped within the `culture-history' paradigm, which seeks to match archaeological evidence to historical sources, serving to construct "a racial and ethnocentric view of early English history" (*ibid.* :29). Moreland also notes that, while it is often implied that clear cultural divisions may be seen regionally in the material culture of the Anglo-Saxon period (which are associated with the `tribes' of the adventus) such distinctions may in fact be far less important than have been previously been suggested (2000:33). He supports this assertion by pointing out that "[w]hile it is the case that there are parts of England where so-called Anglian or Saxon material predominates, this is not always true" (*ibid* .). The presence of `Saxon' material from north of the Humber to Sussex, and the mixture of Saxon types with Anglian material in East Anglia suggests that the idea of (and the search for) bounded regional identities may be, indeed should be, dismissed from the interpretation of the archaeology (*ibid* .).

2.11. The opposite side of the coin to theories such as that proposed by Welch, are those which suggest that the Anglo-Saxon transition was brought about by the impact of a relatively small number of immigrants. In *Rome, Britain and the Anglo-Saxons* , for example, Nicholas Higham proposes a hypothesis that "...allows for massive ethnic continuity from late Roman Britain to Anglo-Saxon England [...] from the weighing of evidence of different kinds so as to arrive at a balance of probability" (1992: 209). Higham suggests that at the end of the Roman period in Britain, falls in production and population, and the `onerous scale' of taxation, led to the decline, in the first half of the fifth century, of the material culture which had been characteristic of Roman Britain (1992:214, 216). Increasing threats from the Scots and Picts led to the involvement of Barbarian warriors in the defence of the British elite, which subsequently, just as Gildas suggested, turned sour. Higham goes on to suggest that

the fight back by the Britons was too little and too late to save the British lowlands for an indigenous society and culture which had been heavily influenced by Romanisation and which thereafter failed to adapt sufficiently rapidly to the radically changed circumstances of the fifth century. Anglo-Saxon warriors rolled up the more westerly areas of the lowland zone during the sixth and seventh centuries, without meeting effective military opposition. [...] When pressurised by raiders or settlers from outside, local societies could not rely on the levels of social and cultural cohesion which already existed or were now developing in upland societies. Without a cohesive ideology, language or culture, and exposed to incomers by the accidents of geography and a long history of cultural receptiveness, the lowlanders were ill-placed to resist even small bands of determined and competent warriors (*ibid* .:223-224).

2.12. Regarding the mortuary evidence, Higham proposes that the distinctive forms of cremation and inhumation seen in the cemeteries of the early Anglo-Saxon period were indeed imported by immigrants and invaders. The success of these forms of burial throughout the wider population, however, owed more to the efficiency with which they advertised the social and ideological affinities of the deceased - useful indeed for those Britons attempting to `fit in' with their new Anglo-Saxon rulers ( *ibid.* : 225). Links between settlers in Britain and their counterparts on the continent encouraged the transfer of fashions, ideology, weapons and other cultural artefacts, a movement that Higham describes as `characteristic' of the Germanic societies in question (*ibid* .).

2.13. According to Higham, the adoption of the language, material culture and traditions of the new Anglo-Saxon elite, "by large numbers of the local people seeking to improve their status within the social structure, and undertaking for this purpose rigorous acculturation" (*ibid.* : 229), is the key to understanding the Anglo-Saxon / Romano-British transition. The progressive nature of this acculturation, and the `retrospective reworking' of kinship ties to the dominant group led, ultimately, to the "myths which tied the entire society to immigration as an explanation of their origins in Britain" (*ibid* .:230). This explains the conviction of later medieval historians (such as Bede) that their ancestral origins were not with the British, but rather with the Germanic invaders of the early Anglo-Saxon period.

2.14. In other words, Higham attempts to account for the demise of the Romano-British material culture in Britain, the adoption of Anglo-Saxon culture and language, and Bede's belief that the people of England largely derived from earlier settlers, *without* requiring large scale invasion or migration.

2.15. Such theories, whilst gaining considerable appreciation over the biologically based theories of mass migration described above, are still vigorously debated by those seeking to theorise approaches to the Anglo-Saxon period. There remains, even in Higham's approach, a strong emphasis on the historical sources in order to interpret the archaeology of the period, and perhaps worse to some critics, a continual reliance on the nature of the incoming cultures as representing `bounded', homogenous, and cohesive ethnic identities (Moreland 2000:42).

2.16. `Small band' theories do, however, have an advantage over theories of mass migration, not only because in the eyes of some they fit the available evidence better, but also because they allow the focus of archaeological debate to rest on the more anthropologically oriented study of acculturation and the construction and nature of early medieval identities. Sam Lucy's attitude for example is bluntly stated in *The Early Anglo-Saxon Cemeteries of East Yorkshire* when she dismisses questions regarding the extent of any biological or population movement during this period as "irrelevant" (1998:20). She goes on to state that what *is* important is what mortuary evidence, material culture and settlement evidence can reveal about the *society* in question, rather than about the ancestry of the people in question (*ibid* .).

2.17. Unfortunately for those hoping to pursue a multidisciplinary approach to the problem, this has resulted in an attitude held by many archaeologists that biological identity or indeed anything biological is entirely unimportant. Despite the often stated concern for contextualising evidence and theories, many otherwise comprehensive accounts of the Anglo-Saxon period now have a gaping hole where once would have been theories about the biological, or indeed geographical, origin of individuals and groups. Higham's *Rome, Britain and the Anglo-Saxons* represents an excellent example in which he manages to almost entirely neglect the issue of biological identity as seen through the remains of the people themselves allowing just half a page of text in his 236 page book. Within twenty-five lines, Higham (whilst not, at least, proclaiming such studies as irrelevant) states that the pursuit of knowledge about the biological ancestry of individuals in Anglo-Saxon cemeteries is pointless, and will remain so despite the best efforts of biological anthropologists until such time as `genetic fingerprinting' may be used on a vast scale. In all fairness, at the time of writing (1992), modern studies on the skeletal remains of the `Anglo-Saxons' were almost unheard of, a situation which is only beginning to change today.

2.18. As a biological *and* cultural anthropologist I would suggest that, whilst perhaps not the decisive factor in shaping identity, biology is at least *a* factor. As such, it would certainly be of benefit to continue to pursue knowledge about the biological component, if any, involved in the origin of the Anglo-Saxon period in Britain. To decide to ignore the issue, perhaps because it appears to be unanswerable at the current time in archaeology, and to decide that the issue itself must therefore be considered unimportant, or worse, irrelevant, seems to me to be evading the issue somewhat. This is especially true in those works which attempt to synthesise the evidence or the history of thought about the period and which aims not only to synthesise the evidence, but also to provide some kind of theory1. Surely a more appropriate response would be to ask how do those fluid social identities (as seen through modern archaeological interpretations) relate to biological identity, both locally on the scale of individual kinship groups and on the larger scale of European population and cultural dynamics? And to answer *that* question, we must learn more about the biological make up of the period. The use of archaeological material, including funerary remains, to investigate ancestry in

relation to ethnicity and identity is made difficult by the nature of cultural (or ethnic) material. It is not always the case that `ethnic symbols' are actually used as such. Some apparent `badges' of group affiliation are in fact meaningless whereas some are true cultural identifiers. Similarly, it is necessary to be aware that those individuals within a cemetery are not necessarily those who belonged to a society in life. There are many examples in anthropological and ethnographic research of societies in which either the males or the females of the society stay in their `ancestral' community, while the other leaves in order to marry and reproduce. In some cases, the `leavers' are returned for burial at the end of life.

2.19. Fortunately, there are still some researchers, mainly in the diverse field of biological anthropology, who do consider the issue of a biological element in the Anglo-Saxon transition to be pertinent. It is to these researchers we turn next.

3. Biological, Genetic and Chemical Research

3.1. In recent years, there has been a resurgence of interest in the nature of the Romano-British / Anglo-Saxon transition, from within the broad remit of biological anthropology. Biological anthropological approaches can add a valuable perspective to debates about identity via direct examination of the remains of the people themselves. Metric approaches, such as craniometry, have the potential to identify patterns over a large geographic area which may indicate population relationships in a way that other biological anthropological approaches (e.g. non-metric approaches) may not. However, such research has only recently regained popularity, and there are just a handful of recent studies which address this particular problem specifically.

3.2. Until very recent years, there has been a notable lack of research done, in the field of biological anthropology, with the aim of examining cultural / biological transitions in the United Kingdom. There are various reasons underlying this neglect, relating to the misuse of biological anthropological research in the past, and an emphasis by anthropologists on diet, disease, etc., in archaeological populations (Mays 1997, and cf. Cox & Mays 2000, Härke 1998, Larsen 1997).

3.3. It must be borne in mind throughout this review that it is not the case that biological ancestry and cultural affiliation can be in simplistically equated, whatever means of investigation is used. As Andrew Tyrrell notes , "[a] distribution of skeletal traits or allele frequencies does not make an Anglo-Saxon any more than does a disc brooch and a cloisonné belt buckle. Yet the literature is filled with such associations both explicit and implicit" (2000:139).

3.4. In "*Warrior Graves?*" (1990), Heinrich Härke attempted to incorporate a degree of skeletal analysis into his examination of weapons burials in the Anglo-Saxon period in Britain. Weapons burials have long been used to make inferences regarding status, economic power, social stratification and the distribution of wealth within cemetery populations. Härke tests the `weapons = warriors' assumption using archaeological, historical and skeletal sources of information. Finding no correlations between `warrior specific' criteria (e.g. inclusion in periods of unrest, adult age, osteological build, presence of fractures, etc.) and the insertion of weapons in graves, Härke concludes that "the fact that weapon burial in this period was a Germanic rite make[s] it probable that the men buried with weapons in Anglo-Saxon cemeteries were predominately or exclusively of Germanic stock, whereas the group of men buried without weapons in the same cemeteries included a sizable Celtic (Romano-British) element" (1990: 40). While there was no correlation between the factors mentioned above, and the inclusion of weapons in graves, Härke did find that those individuals with weapons were on average between two and five centimetres taller than those individuals without weapons. This, he suggests is due to genetic rather than nutritional differences within the cemetery population on the basis that there was no difference between the groups in the incidence of enamel hypoplasia (an indicator of nutritional stress in childhood). In addition to these correlational studies, Härke conducted a frequency analysis of a number of epigenetic traits in groups with and without weapons. He found that in two of the five cemeteries studies, a `clear pattern' emerged: "individuals buried with weapons have some traits which do not appear among individuals without weapons, and/or vice versa. [...] In other words, the two groups belonged to different descent groups (families in the modern sense)" (1990:41).

3.5. While Härke's analysis is commendable on a number of counts because he questions the assumptions made by archaeologists and attempts to involve osteological evidence in his analysis, there are a number of major problems inherent in his study. These problems have been noted by Lucy (2000) and Tyrrell (2000), who criticise Härke's study firstly for his reliance on traditional views of ancestry and ethnicity, and secondly for his `unscientific' treatment of the epigenetic evidence. Tyrrell notes that the six epigenetic traits used by Härke are neither well chosen nor numerous enough to fulfil scientific expectations. Indeed, the `dental anomaly' is not even identified in Härke's publication (2000:150-1). Additionally, the method used (frequency) to analyse the epigenetic traits is scientifically ineffectual: in order to compute the relative distance between groups a non-Euclidian distance measure must be used (*ibid* .:151). Tyrrell explains that environmental effects on such polymorphic traits are such that "the same individual who expresses a trait in one environment may not express it under different developmental environments [...therefore] comparing individuals within a population is meaningless in terms of determining genetic relationship" (*ibid* .: 152). In *Corpus Saxonum* , Tyrrell presents the results of his `comprehensive study' of one of the cemeteries used in Härke's studies2. Tyrell split his sample-comprising both male and female adults in both groups -- into those with and without grave inclusions. Thirty-five cranial traits were examined for each individual, which were then analysed using the Mean Measure of Divergence test, which measures the relative dissimilarity of two groups. Tyrrell's analysis showed *no* difference between the two groups, a result contrasting with Härke's analysis. Like Lucy (1998), however, Tyrrell ultimately concludes that "the presence of actual `Germanic' or continental genes is likely to have been totally irrelevant" (*ibid* .:154).

3.6. Non-metric dental traits have also been used to examine population relationships in Romano-British / Anglo-Saxon England by Jeff Lloyd-Jones, for his PhD at Glasgow University (1997, 1999). Thirteen genetically independent traits were examined for a total of 304 individuals from seven cemeteries in the south and east of England, and analysed using the Mean Measure of Divergence. Lloyd-Jones found that most of the standardised MMD scores were statistically significant, although two of the neighbouring sites were indistinguishable from one another. "In general each site tends to have greater biological similarity with its neighbour than with sites of greater geographic distance even though it is separated from the neighbour by time and cultural material" (1997: 27 In conclusion, Lloyd-Jones suggests that the results support theories that a small number of incomers initiated the replacement of the indigenous Romano-British culture with a new Anglo-Saxon culture, and notes that despite the small site sample of his research, such results would be unlikely to occur by chance, if the transition period in question had been caused by a series of invasions from the continent.

3.7. In contrast to the research of Tyrrell and Lloyd-Jones, a recent genetic study has suggested that there may, after all, have been a substantial Anglo-Saxon contribution to the modern English gene pool - i.e. a large-scale population movement or immigration in the early Anglo-Saxon period.

3.8. Weale *et al*. tested alternative migratory models by collecting samples from living individuals in seven towns along an east-west transect of Central England and North Wales, in order to evaluate evidence of local genetic transitions, or male population migration (2002:1009). Data

were compared with data from Friesland (thought to be one of the geographical sources for Anglo-Saxon invasion) and Norway (a source of Viking invaders) in order to look for evidence of continental immigration.

3.9. The results of analysis of genetic distance and population differentiation show that there were no significant within-England clinal patterns. In contrast, the two North Wales towns were found to differ significantly from each other as well as from the Central English towns. Even more importantly (from an Anglo-Saxon perspective), no significant differences were found between the Friesland and the Central England towns, whilst comparisons between Central England towns and Norway are (with just one exception, possibly explicable by small sample size) all significant. North Wales towns are statistically different from both the Friesland and Norway samples. As Weale *et al*. suggest, "[t]aken together, these results suggest considerable male-line commonality between Central England and Friesland." (*ibid*. :1017) The lack of similarities between the Norway and Central England samples fail to provide any evidence of a substantial Norwegian Viking contribution to the Central English gene pool (*ibid* .).

3.10. Weale *et al*. surmise that their results "indicate the presence of a strong genetic barrier between Central England and North Wales and the virtual absence of a barrier between Central England and Friesland." (*ibid*. :1018) They conclude that the most likely explanation for this `barrier' is that "the Anglo-Saxon cultural transition in Central England coincided with a mass immigration event from the continent. Such an event would simultaneously explain both the high Central English-Frisian affinity and the low Central English-North Welsh affinity." (*ibid* .) They note further that within the given parameters of the study, "an Anglo-Saxon immigration event affecting 50% - 100% of the Central English male gene pool is required [...however] our data do not allow us to distinguish an event that simply added to the indigenous Central English male gene pool from one where indigenous males were displaced elsewhere or where indigenous males were reduced in number" (*ibid* .).

3.11. Although Weale *et al* 's results cannot prove that an Anglo-Saxon migration occurred, a background migration rate of 0.3% would be required to effect the same results, a rate which Weale et al. describe as "an extremely high rate even by modern standards and [which] would have to have been maintained continuously over thousands of years" (*ibid* .). Additionally, they note that the results could have been caused by a mass migration event outside the Anglo-Saxon period, and that during the Roman period in Britain small numbers of Frisian mercenaries were recruited during this period, some stationed well into the north of England. However, they argue, it would be extremely odd to suggest that such recruitment inspired movement was effectively a mass migration, whilst denying the post-Roman Anglo-Saxon migration, as some archaeologists are wont to do (*ibid* :1019).

3.12. A further approach to the problem of Anglo-Saxon migration has been made in the field of enamel isotope analysis. "Tooth enamel forms during childhood and does not remodel. For this reason, enamel phosphate is an ideal media to investigate immigration because it locks in characteristics of the childhood environment. If an individual immigrated to Britain later in life, his or her isotopic ratios should differ from those who grew up in the new residential environment (Budd *et al* . 2001, 2003, 2004; Price *et al* . 2002). Thus, both strontium and oxygen isotopic ratios can potentially identify first generation immigrants in a burial population" (http://www.dur.ac.uk/p.d.budd/isogeochem/Basic%20page.htm).

3.13. Currently, investigations are being carried out on burials from the 4th to early 7th century Anglo-Saxon cemetery at West Heslerton, North Yorkshire, which contained some 300 inhumations and a small number of cremations. As Budd notes,

The early date of the cemetery has promoted speculation that there might be a significant migrant element among the population. Adding to this, the site has produced two burials with weapons where the human remains are considered female on osteological grounds. There are also a number of further weapon burials of `tall and gracile' individuals. It has been suggested that the different stature of these individuals might represent a different ethnic group, possibly a Scandinavian component among the cemetery population. (http://www.dur.ac.uk/p.d.budd/isogeochem/west_hes.html)

3.14. Thus far, research on thirty-two individuals from this site has indicated that these individuals are divided into two groups, with different places of origin (Budd *et al* . 2002: A109). Eventually researchers hope to be able to comment on the possible origin of these two groups.

3.15. Isotope analysis is also being used by this team in order to attempt to shed light on patterns of residential mobility as seen in individuals from Bamburgh, Northumbria (http://www.dur.ac.uk/p.d.budd/isogeochem/bamburgh.html).

3.16. The research described in the preceding sections outlines that which has been done in recent times to attempt to determine the contribution, if any, of Anglo-Saxon biological movement to the development of an Anglo-Saxon culture in the early Anglo-Saxon period in Britain.

3.17. Despite the small number of studies which have been done, it is clear that results are both extremely informative, but also conflicting, with Lloyd-Jones' research suggesting biological continuity in this period in contrast to Weale *et al* . suggesting a substantial biological contribution to the Anglo-Saxon male gene pool. As yet, results from isotope analysis are inconclusive. The divide in the sample from West Heslerton may yet provide interesting results. In sum then, the question of a biological contribution in this period remains, despite the assertions of some, wide-open.

4. Craniometric Studies and the Early Anglo-Saxon period

4.1. Studies using craniometry, which address the Early Anglo-Saxon period in particular, are few and far between, even when the whole range of such research over time is considered. The major study in this area was published in 1926. In this study, Morant examined Anglo-Saxon skulls from the British Museum, the museum of the Royal College of Surgeons and the London Museum. Using Pearson's Coefficient of Racial Likeness (CRL), he compared Anglo-Saxon skulls with series from the Neolithic, the Bronze Age and the Iron Age. Morant found that the Anglo-Saxon skulls, which all dated between the 5th and 10th centuries AD, formed

a perfectly homogenous population, and the type is clearly distinguished from that of the British Iron Age by its greater calvarial height, though the lengths, breadths and cephalic indices of the two are almost identical. The Anglo-Saxon skulls are of precisely the same shape as the suggesting that the earlier and later invaders lived side by side without intermixture for some centuries. From other evidence we know that the former were not exterminated, but that they were in all probability, far more numerous than the Anglo-Saxon during that period (1926: 57).

4.2. Morant also divided his Anglo-Saxon sample geographically, with reference to the divisions made by Bede, into four groups; the West Saxons, the South Saxons, the Angles and the Jutes. He found, however, that these four groups "represent populations which are extremely

similar, if not absolutely identical [...] only one - that between the Angles and the West Saxons - suggests any real difference of type" (*ibid* .: 77). He further notes that skulls associated with Anglo-Saxon artefacts belong to a `single homogenous racial type', and that any `admixture' with the indigenous population must have been slight, and invisible in the remains available. The differences between the Anglo-Saxons and the Iron Age samples, suggest Morant, lie mainly in the greater basio-bregmatic height, and the greater nasio-basion length of the Anglo-Saxon skulls (*ibid* .: 85).

5. The Present Research

5.1. Given the proceedings of the previous sections, it should be clear that between historical, archaeological and anthropological studies into the origin of the Anglo-Saxon period in Britain, many theories and approaches from various disciplines have failed to come to any agreement about the mechanism by which this period developed out of the preceding Romano-British period. There appears to be a leaning at the present time in archaeology toward explanations which do not emphasise the role of mass migration/invasion, and which instead allow for rapid acculturation by indigenous populations in response to a small-scale elite take over of political control. This approach has unfortunately led some to conclude that the pursuit of knowledge about the biological component in this process is irrelevant (Lucy 1998), or unlikely to provide any answers at the current time (Higham 1992). However as Tyrrell notes, "[t]he lack of a biological perspective in archaeological and historical discourses on identity in effect denies the study or existence of a fundamental constituent of corporeal identity: that which is the sum of the interplay between genome, environment and body idiom" (2000:318).

5.2. The aim of the author's forthcoming research therefore, is to provide a perspective on population change or continuity between the Romano-British and Anglo-Saxon periods in England, through an analysis of cranial morphological variability over time. Fortunately, in recent years, researchers from different areas of biological anthropology, genetics, and even geochemistry POSTER 3have once more begun to address this question as, despite what some archaeologists or historians may suggest, such questions *are* still important, and will remain so as long as they remain unanswered. Such research is now being done in an academic atmosphere which welcomes multidisciplinary and holistic research methods, and is, therefore, regarded as research which adds to the body of knowledge about the Anglo-Saxon period rather than as theories which stand alone and divorced from the larger context of the period. For these reasons, the author's research utilises the techniques of craniometry to address the questions regarding the continental biological component of the Anglo-Saxon transition in England. Although unpopular in recent years in Britain, craniometry has been widely used overseas to provide a perspective on biological (genetic) change and population movement in many parts of the world (cf. Hemphill 1998, 1999a, 1999b), and despite the reservations of some academics, is generally considered to provide a valid means of examining population history on both a macro- and micro-evolutionary scale (cf. Kohn 1991, Relethford 2004).

5.3. Craniometric data on thirty-seven variables have been collected, using traditional craniometric methods (to aid comparability) from a number of sites in the North East of England. The area between Newcastle and the Humber has been largely neglected in studies of the Anglo-Saxon period in Britain, and it is this geographical area which forms the main focus of the research. Data have been collected from inhumation cemeteries dating from the Iron Age to the medieval period, and include Iron Age, Roman, Romano-British, early (pagan) Anglo-Saxon, later (Christian) Anglo-Saxon and later medieval groups POSTER 2.

5.4. In this research the craniometric data from these samples are analysed using multivariate statistical methods to ascertain the morphological variability within and the `biological distances' between these groups. The groups are also analysed in comparison with their contemporaries from the south and east of England, and from Denmark, the Netherlands and Germany (i.e. the historical homes of the Angles and Saxons). The results of these analyses will then be interpreted in the light of the various theories and research described above.

5.5. This research is currently in the data collation and analysis stage, and the results and conclusions will be available in 2005.

References

Budd P, Montgomery J, Evans J, et al. 2002. *Reconstructing Anglo-Saxon immigration and residential mobility from O-, Sr- and Pb-isotope analysis* . GEOCHIM COSMOCHIM *AC* 66 (15A), A109-A109 Suppl. 1 AUG 2002

Budd, P. D. et.al. http://www.dur.ac.uk/p.d.budd/isogeochem/Basic%20page.htm

http://www.dur.ac.uk/p.d.budd/isogeochem/west_hes.html

http://www.dur.ac.uk/p.d.budd/isogeochem/bamburgh.html

Cox, M. & S. Mays. 2000. *Human Osteology in Archaeology and Forensic Science* . London: Greenwich Medical Media

Frazer, W. O and A. Tyrrell (Eds). 2000. *Social Identity in Early Medieval Britain* . London: Leicester University Press

Härke, H. 1990. Warrior graves? The background of the Anglo-Saxon weapon burial rite. *Past & Present* 126, 22-43.

Härke, H. 1998. Archaeologists and Migrations: A problem of attitude? *Current Anthropology* 39 (1)

Hemphill, B. E. 1999. Foreign Elites from the Oxus Civilisation? A Craniometric Study of Anomalous Burials from Bronze Age Tepe Hissar. *American Journal of Physical Anthropology* 110, 421-434.

Hemphill, B. E. 1999. Biological affinities and adaptations of Bronze Age Bactrians: IV. A craniometric investigation of Bactrian origins. *American Journal of Physical Anthropology* 108 (2), 173-192.

Hemphill, B. E. 1998. Biological affinities and adaptations of Bronze Age Bactrians: III. An initial craniometric assessment. *American Journal of Physical Anthropology* 106 (3), 329-348.

Higham, N. 1992. *Rome, Britain and the Anglo-Saxons* . Guildford: Seaby

Kohn, L. A. P. 1991. The role of genetics in craniofacial morphology and growth. *Annual Review of Anthropology* , 20, 261-278

Larsen, C. S. 1997. *Bioarchaeology: Interpreting behaviour from the human skeleton* . Cambridge. Cambridge University Press

Lloyd-Jones, J. Calculating biodistance using dental morphology. In Anderson, S. & Boyle, K. (Eds) 1997. *Computing and Statistics in Osteoarchaeology: Proceedings of the Second Meeting of the Osteoarchaeological Research Group held in London on 8* th *April 1995* . Oxford: Oxbow for the Osteoarchaeological Research Group

Lucy, S. 2000. *The Anglo-Saxon way of death: burial rites in early England* . Thrupp, Gloucestershire: Sutton

Lucy, S. 1998. *The Early Anglo-Saxon Cemeteries of East Yorkshire: An analysis and reinterpretation* . BAR British Series 272

Mays, S. A. 1997. A Perspective on Human Osteology in Britain. *International Journal of Osteoarchaeology* 7, 600-604.

Mays, S. Biodistance studies using craniometric variation in British archaeological skeletal material. In Cox, M. & Mays, S. 2000. *Human Osteology in Archaeology and Forensic Science* . London: Greenwich Medical Media

Morant, G. M. 1926. A first study of the craniology of England and Scotland from Neolithic to early historical times, with special reference to the Anglo-Saxon skulls in London museums. *Biometrika* 18, 56-98.

Moreland, J. Ethnicity, Power and the English. In Frazer, W. O and A. Tyrrell (Eds) 2000. *Social Identity in Early Medieval Britain* . London: Leicester University Press

Relethford, J.H., *Boas and beyond: Migration and craniometric variation* .
American Journal of Human Biology 16 (4), 379-386

Tyrrell, A. *Corpus Saxonum* : Early Medieval Bodies and Corporeal Identity. In Frazer, W. O and A. Tyrrell (Eds). 2000. *Social Identity in Early Medieval Britain* . London: Leicester University Press

Weale, M. E., D. A. Weiss, R. F. Jager, N. Bradman and M. G. Thomas. 2002. Y Chromosome Evidence for Anglo-Saxon Mass Migration. *Molecular Biology and Evolution* 19 (7), 1008-1021

Welch, M. 1992. *Anglo-Saxon England* . London: B. T. Batsford Ltd.

---

1. It may be pertinent to question why, when she analyses and stresses the importance of context on the historical and archaeological research of the past, Lucy does not attempt to analyse her own stance in a similar fashion?

2. It is unfortunate that Tyrrell has failed to publish this study in full, and that possible means of acquisition of further information are hampered by the fact that his PhD thesis may not be accessed for a number of years to come.

Romano-Britain to Anglo-Saxon England (1)

The Question: What was the cause of the changes which occurred in England around the 5th century A.D.?

This is a complex question which, for the purpose of this study, may be reduced to two main hypotheses:

Was the mechanism of change biological, i.e. a mass population movement of Angles, Saxons and Jutes into England, possibly constituting an invasion, as is suggested by historical sources? Or was this transition a result of peaceful communication and trade between Britain and mainland Europe, with little or no population change; a more 'politically' acceptable theory.

Romano-British Period	Anglo-Saxon Period
• Proliferation of urban settlement evidence. • Cemeteries based around settlement sites, often beside major roads leading into towns. • Corpses generally buried without 'coffins', grave goods or artefacts, and often with the head oriented to the west.	• Known for its cemeteries in rural locations. Relative lack of settlement archaeology. • Corpses cremated or inhumed. • Burials often associated with grave goods, including jewellery, ornaments, weapons, pottery, toilet sets and amuletic items.

Aims and Methods of this study:

In recent years, research examining the roles of biological / population change in precipitating cultural transitions has enjoyed renewed popularity. Studies focussing on the Romano-British / Anglo-Saxon transition are limited, and their methods and sites used are summarised on poster number 3.

My research will use traditional craniometric techniques and multivariate analyses to focus specifically on biological continuity / change in the North East of England, as this area has so far been neglected in recent studies. The morphology (shape) of Iron Age, Romano-British and Anglo-Saxon skulls will be compared with that of skulls from similar time periods in Denmark, Germany and The Netherlands (Poster number 4), and the levels of similarity between these groups statistically assessed. Poster number 2 shows the location and distribution of North East English cemetery sites to be used in this study.

Results may subsequently be plotted graphically to illustrate the morphological (i.e. genetic) relationships between all the groups under study, and compared with results from other areas of research.

North East Sites to be included in this study (2)

Hartlepool Friary (Medieval)

Blackgate, Newcastle (Anglo-Saxon)

Guisborough Priory (Medieval)

West Heslerton (Anglo-Saxon)

Wetwang / Garton Slack (Iron Age)

Norton, East Mill (Pagan Anglo-Saxon)

Norton, Bishopsmill School (Christian Anglo-Saxon)

Trentholme Drive, York (Romano-British)

Spofforth (Later / Christian Anglo-Saxon)

Sites selected for use on the basis of population / sample size, and preservation level for maximum total sample size.

Sewerby (Pagan / Christian Anglo-Saxon)

Hayton (Roman/ Romano-British)

Sancton (Anglo-Saxon)

Castledyke South Pagan Anglo-Saxon

Recent Research: Loci, Methods & Conclusions (3)

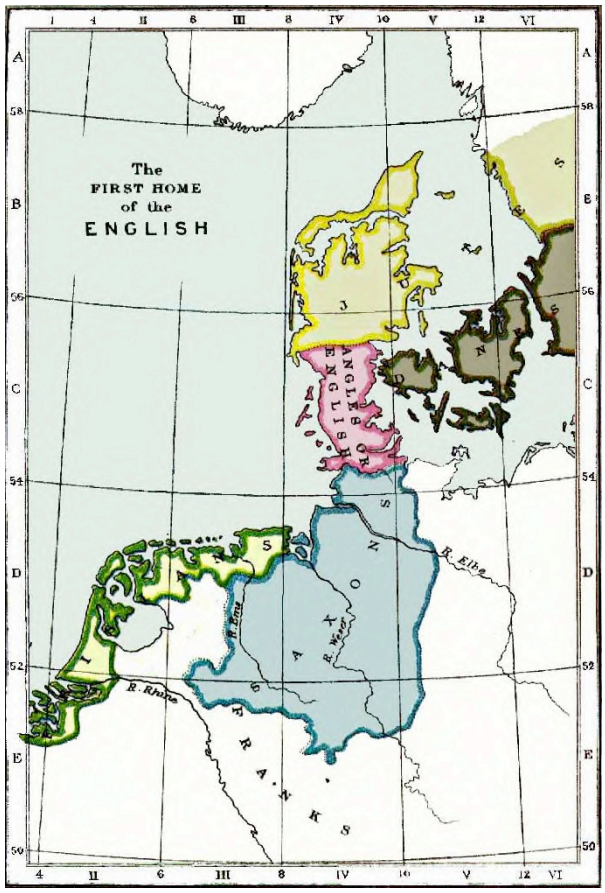
R-B = Romano-British, AS = Anglo-Saxon
Pb = Lead, Sr = Strontium, O = Oxygen

Enamel Isotope Analysis
Research by Budd et al, analysed Pb, Sr and O isotopes in dental enamel from the West Heslerton Anglian cemetery. They have found an approximate 50:50 division as regards place of childhood home. This division is, as yet, unexplained. The eventual results will be valuable as comparative evidence in this study.

Genetic Research
Weale et al (2002) compared samples taken from living males from Central England, Wales, Friesland and Norway, and found significant differences between the Welsh, Norwegian and English samples but no such difference between the English and Fries samples, thus supporting theories proposing a mass immigration and widespread biological change

Non-Metric Dental Traits
J. Lloyd Jones (1992); Seven ‘paired’ R-B and AS cemetery populations were studied for the presence / absence of 13 non-metric dental traits. Greater geographical rather than temporal similarity was observed, supporting theories of cultural rather than biological change in this location.

Historical Origins of ‘The English’ (4)



Until relatively recently, the popular view of the ‘origins of the English’ was grounded in the view of history expressed by the venerable Bede of Northumbria (*Historia Ecclesiastica*) and Gildas’ (*De excidio*). These writings plainly stated that the Angles, Saxons and Jutes invaded Britain en mass, precipitating (via wide scale immigration, i.e. biological change) the ‘racial’ and cultural transformation of Britain. Bede makes clear the origins of these invaders which, as may be seen from the map opposite, comprise modern day Denmark, Germany and The Netherlands.

The acceptance of population change as the mechanism leading to cultural change, in this instance, only began to be challenged in the 1970s, when historical sources were critically re-evaluated and new technologies in archaeology shifted attention away from migrationist theories and attempts to ‘fit in’ with historical perspectives. Since then and until very recently, migration-oriented theories have been academically and politically unpopular.

Only in the late 1990s did academics and researchers begin to turn back to the thorny issue of the role of population movement in the Romano-British to Anglo Saxon transition in England, and since then a wide variety of techniques have begun to be applied in the pursuit of answers.